

Latynin, Ye. V.

Call Nr: AF 1157027

AUTHOR: Mordvintsev, L.A.

TITLE: Technology of Welding, Soldering and Brazing
(Tekhnologiya svarki i payki); Practical Manual for
Designers and Technologists (Prakticheskoye posobiye
dlya konstruktorov i tekhnologov)

PUB. DATA: Gosudarstvennoye izdatel'stvo oboronnoy promyshlennosti,
Moscow, 1957, 150 pp., 8,700 copies

EDITORS: Pugachev, A.I., Candidate of Technical Sciences; Ed. in
Chief: Latynin, Ye. V., Engineer; Ed. of the Publ. House:
Kuznetsova, A.G.; Tech.Ed.: Pukhlikova, N.A.

PURPOSE: The monograph is intended for designers and technologists
without special training in welding methods but whose work
calls for design and manufacture of welded structures.

COVERAGE: The monograph describes the most widely employed methods of
welding, brazing and soldering of metals, their advantages
and shortcomings, and their fields of application. A
concise description is given of preparatory operations,
selection of a method and the technology of welding various

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Technology of Welding, Soldering and Brazing (cont)

metals and alloys. Brief data on common defects and methods of weld joint quality control are included. With this manual a more intelligent selection of structure types, materials, methods and techniques of welding may be made for the design and manufacture of welded structures. Persons credited with assisting the author are Candidates of Technical Sciences: Verchenko, V.R.; Godin, V.M.; Mordvintseva, A.V.; Petran', I.V.; and Pugachev, A.I. The bibliography contains 34 references of which 33 are Soviet.

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SADOVSKIY, I.N., kand.tekhn.nauk, red.; LATYNIN, Ye.V., inzh., red.;
TUBYANSKAYA, F.G., red.izd-va; ROZHN, V.P., tekhn.red.

[Research on optimal rocket trajectories; collection of translated
foreign articles] Issledovanie optimal'nykh rezhimov dvizheniya
raket; sbornik perevodov inostrannykh statei. Moskva, Gos.izd-vo
obor.promyshl., 1959. 292 p. (MIRA 12:9)
(Space ships) (Rockets (Aeronautics))

SHEKHER, M.S., kand.tekhn.nauk, dots., red.; LATYNIN, Ye.V.,
inzh., red.; STARYKH, A.P., red. izd-va; ROZHIN, V.P.,
tekh. red.

[Working processes of heat engines] Rabochie protsessy teplovykh dvigatelei. Moskva, Oborongiz, 1962. 134 p.
(MIRA 15:9)
(Gas and oil engines)

KHRUL'KOV, Vladimir Andreyevich, kand. tekhn. nauk; IPPOLITOV, G.M.,
inzh., retsenzent; LAMININ, Ye.V., inzh., red.

[Grinding of heat-resistant alloys] Shlifovanie zharoprech-
nykh splavov. Moskva, Mashinostroenie, 1964. 190 p.
(MIRA 17:8)

(A) L 11137-66 EWT(m)/T DJ/VE	
ACC NR: AP6002535	SOURCE CODE: UR/0286/65/000/023/0038/0038
INVENTOR: <u>Latynina, A. I.</u>	
ORG: none	
TITLE: Preparative method for immersion oil. Class 23, No. 176653 [announced by Associated Leningrad Optical Equipment Enterprises (Leningradskoye ob'yedineniye optiko-mekhanicheskikh predpriyatiy)]	
SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1965, 38	
TOPIC TAGS: immersion oil, cable oil, immersion method	
ABSTRACT: An Author Certificate has been issued for a preparative method for an immersion oil based on <u>cable oil</u> . To prevent interaction of the oil with biological microspecimens, the cable oil is mixed with polychlorodiphenyl. [SH]	
SUB CODE: 17, 11/ SUBM DATE: 27Sep63/ ATD PRESS: 4173	
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Latynina, L. A.
USSR/Geophysics - Seismology

FD-1190

Card 1/1 Pub 45-12/18

Author : Bonchkovskiy, V. F., and Latynina, L. A.

Title : Torsional deformation gauge (deformograph)

Periodical : Izv. AN SSSR, Ser. geofiz. 275-277, May-Jun 1955

Abstract : The authors describe the principle governing the action of the torsional deformation gauge, developed in 1952 before the Garm expedition of the Geophysical Institute, for measuring and recording slow deformations by means of the transfer of linear displacements of a rod resting on a very thin turning cylinder. The advantages are: sensitivity is up to 0.1-0.01 micron per millimeter of deflection on the recording tape; absence of turning forces which permits prolonged observations on natural deformations. No references.

Institution: Geophysical Institute, Academy of Sciences *USSR*

Submitted : August 20, 1954

Latynina, L.A.

49-58-3-14/19

AUTHOR: Latynina, L.A.

TITLE: On the Existence of Convection Currents in the Earth's Envelope (O sushchestvovanii konveksionnykh techeniy v obolochke zemli)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya, 1958, Nr 3, pp 391-397 (USSR)

ABSTRACT: The author first gives a brief resumé of the literature, mentioning Holmes (1932), Vening Meinezs (1940 and 1952), Griggs (1939), Jeffreys (1954), Bonchkovskiy (1954) and Magnitskiy (1955). She points out that geophysical knowledge is insufficient at present to resolve the question completely. Heat convection can only take place if the increase of density with depth due to the change in chemical composition does not exceed the decrease of density due to the rise in temperature. Since the magnitude of the temperature coefficient of expansion is small for rocks, this is virtually equivalent to the condition for a homogeneous medium. In actual fact, since we know from seismic data, that the envelope is not homogeneous it seems possible that there may be two convective layers - the lower one inducing currents in the upper by virtue of stresses across the boundary at a depth of about 900 km. The observed equality

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49-58-3-14/19

On the Existence of Convection Currents in the Earth's Envelope.

of heat flow in continental and oceanic regions indicates either that heat transfer takes place partly by convection, or that the quantity of radioactive elements per unit area is the same in both regions but is concentrated in the core (under continents and at depths of 100-200 km under oceans). Consideration of convection currents in the envelope starts from the supposition of homogeneity of composition and the possibility of representation as a viscous body. The author's object is to show that the temperature in the Earth is sufficiently high for convection currents to exist - presuming all the other necessary conditions are fulfilled. She starts with the stability criterion defining the Rayleigh number. Taking representative values for the envelope it is found that the temperature drop there for maintenance of equilibrium is about 1°C . This is, of course, exceeded in fact, but it may be the constants employed in its derivation are wrong by several orders of magnitude. It is necessary to examine the change of stability with vertical temperature gradient and with kinematic viscosity. The author

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considers the onset of convection between two horizontal planes with usual first order approximations as regards velocity, density, etc. In the first case considered, the vertical temperature gradient depends on the depth with the viscosity constant, whilst in the second the viscosity depends on the depth and the temperature gradient is constant. In both cases, sixth order differential equations are obtained. The first is solved by a variational method. It indicates that the higher the rate of change of temperature in the surface layers and the less the depth at which the temperature change becomes insignificant, the more stable the system. The results obtained show that if the rate of change of temperature with depth decreases exponentially, the allowed temperature difference between the surfaces of the layer increases ten times. In the second case, a particular type of viscosity change with depth is taken in order to facilitate solution of the equation. The solution obtained indicates that the usual Rayleigh formula holds if the viscosity used is averaged over the depth. The temperature increase is calculated to continue only to 500 km. There are 1 figure and 14 references, of which 6 are Russian,

Card 3/4 8 English.

49-58-3-14/19

On the Existence of Convection Currents in the Earth's Envelope.

ASSOCIATION: Moscow State University imeni M.V.Lomonosov (Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova)

SUBMITTED: June 12, 1957.

AVAILABLE: Library of Congress.

Card 4/4

AUTHOR: Latynina, L.A.

SOV/49-58-9-3/14

TITLE: Thermal Convection in the Earth's Envelope
(Teplovaya konvektsiya v obolochke zemli)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya,
1958, Nr 9, pp 1085 - 1098 (USSR)

ABSTRACT: The article considers gravitational thermal convection produced in a layer of material by a vertical, super-adiabatic temperature gradient. This corresponds roughly to the state in the Earth's envelope.
A spherical layer of viscous liquid in a radial, gravitational field is considered - the upper boundary being fixed (at the crust) and the lower being free (at the core). This is simplified to the plane parallel case between $z = 0$ and $z = h$. The temperature is assumed to increase linearly with depth initially but, at a certain moment, a heat source is distributed through a thin surface layer (the source having a variable, horizontal density). The normal equations for a viscous fluid are employed but it is pointed out that the medium is really pseudo-viscous and, hence, the two cases are not identical in the initial and final stages of convection.

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It is assumed that variation of density with depth can be ignored and also: 1)

$$\rho' = \rho_0 \alpha T \ll \rho_0 ; \quad (1)$$

the change density, is small compared with ρ_0 , the average density; 2) \underline{v} the velocity of the material, is sufficiently small for $(\underline{v} \text{ grad}) \underline{v} \ll \nabla^2 \underline{v}$.

The temperature and pressure are written in the form :

$$T(x, z, t) = \beta z + \theta(x, z, t), \quad p(x, z, t) = p_0(z) + p'(x, z, t) \quad (2)$$

where p_0 satisfies the equation:

$$\partial p_0 / \partial z = g \rho_0 (1 - \alpha \beta z) \quad (3).$$

The origin of co-ordinates is taken in the surface with the z -axis downwards. The convection equations are given

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to the first order approximation (Ref 2) by:

$$\rho_0 \frac{\partial}{\partial t} (u, w) = (0, -\alpha g \theta) - \frac{1}{\rho_0} \left(\frac{\partial}{\partial x}; \frac{\partial}{\partial z} \right) p' +$$

$$+ \nu \nabla^2 (u, w) + \frac{\nu}{3} \left(\frac{\partial}{\partial x}; \frac{\partial}{\partial z} \right) \text{div } \underline{v} \quad (4)$$

$$- \alpha \frac{\partial}{\partial t} \theta + \text{div } \underline{v} = 0 \quad (5)$$

$$\left(\frac{\partial}{\partial t} - k \nabla^2 \right) \theta = - \left[\beta w + w \frac{\partial \theta}{\partial z} + u \frac{\partial \theta}{\partial x} \right] + E + F \quad (6)$$

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where $\nabla^2 = \frac{\partial^2}{\partial x^2} + \frac{\partial^2}{\partial z^2}$, P is the density of the

thermal energy sources and E , the dissipative term, is equal to:

$$\frac{I\nu}{c_p} \left[2 \left(\frac{\partial u}{\partial x} \right)^2 + \left(\frac{\partial u}{\partial z} + \frac{\partial w}{\partial x} \right)^2 + 2 \left(\frac{\partial w}{\partial z} \right)^2 \right]$$

(c_p is the thermal capacity and I the mechanical equivalent). The dissipative term depends on second order coefficients but, owing to the magnitude of ν , has to be retained.

u and p' are eliminated from Eqs.(4) and (5) to give a differential equation in w and θ (7). Dimensionless quantities \bar{z} , \bar{w} and $\bar{\theta}$ are now introduced. Typical values for the thickness of the layer, z_0 , stationary

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convective velocity w_0 and the average temperature θ_0 are taken to be : $z_0 = 10^8$ cm , $w_0 = 10^{-7}$ cm/sec, $\theta_0 = 10^2$ degrees. α is taken = $10^{-4} - 10^{-5}$ degree $^{-1}$, $\nu = 10^{20} - 10^{22}$ cm 2 /sec, $k = 10^{-2} - 10^2$ cm 2 /sec, $\beta = 10^{-5}$ degree/cm, $g = 10^3$ cm/sec 2 . Substituting these values in Eqs.(5) - (7), it can be seen that the term:

$$\alpha \frac{\partial \theta}{\partial t}$$

can be ignored in Eq.(5), the dissipative term can be ignored in Eq.(6) and the terms:

$$\frac{\partial}{\partial t} \nabla^2 w \quad \text{and} \quad \alpha \left(\frac{\partial}{\partial t} - \nu \nabla^2 \right) \frac{\partial^2 \theta}{\partial z \partial t}$$

can be ignored in Eq.(7) . This reduces the basic equations to the forms shown in Eq.s(8), (9) and (10). The

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boundary conditions for $z = 0$, $z = h$ can be written as: 1) $\theta = 0$, 2) $u = w = 0$ on the fixed surface, 3) $\partial u / \partial z = 0$ and (to a first approximation) $w = 0$ on the free surface.

The initial conditions are:

$$T(x, z, t = 0) = \beta z ; \quad \theta(x, z, t = 0) = 0 .$$

For times close to $t = 0$, the deviation of the temperature from its initial value is small and non-linear differential Eqs.(8) - (11) can be solved by a series method. For times sufficiently far away from $t = 0$ a numerical method of solution can be applied. An equation (12) is obtained for w with a distribution of sources given by Eq.(13) which is then resolved into a series in:

$$\sin \frac{n\pi}{h} z .$$

This gives the equations (14) for w , u and θ .

1) The velocity of motion corresponding to the n -th harmonic increases with time if:

$$\alpha g \beta a^2 h^4 \geq k \nu e_n^6$$

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and goes to a limit , b_n , if this inequality does not hold. In the simplest case, these correspond to the example considered by Rayleigh.

2) Assuming the conditions (16), it is shown that the first harmonic in the series analysis is of greater importance than the others. Hence, it is assumed that the simple function:

$$P(z) = p_0 \sin \frac{\pi}{h} z .$$

will sufficiently indicate the nature of the processes involved.

The time interval under consideration is now divided up into N parts (t_0 , $t_0 + \ell$, etc.) and $\partial \theta / \partial t$ is written as:

$$\frac{\theta_{i+1} - \theta_i}{\ell}$$

Card7/12 giving Eq.(17). The values of the various functions

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present in the equations is now obtained by extrapolation from t_i to t_{i+1} . The super-adiabatic temperature difference is taken to be $1\,000^\circ$. Various values of the other parameters are taken, (e.g. $h = 400, 2\,000, 3\,000$ km; $\alpha/\nu = 10^{-25}, 10^{-26}, 10^{-27}$ sec/cm²deg; $\beta h = 1\,000^\circ$; $P = 6 \times 10^{-17}$ cal/cm³sec).

The solution obtained indicates the re-distribution of material due to the convection. Figure 1 shows the dependence of temperature on depth for three cases - I - in the centre of the rising stream, III - in the centre of the descending stream and II - on the boundary between the two.

As the motion develops, the higher harmonics in θ and w grow in comparison with the first harmonic (as can be seen from the table). Thus, the main, initial current progressively breaks up into smaller ones.

The maximum of the first harmonic can be referred to as the main maximum since it exceeds in value the maxima of all higher harmonics. Hence, one can speak of the maximum

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velocity, w . Values of w_{\max} are given for

$h = 3\ 000, 2\ 000$ and 400 km.

Within the limits of the calculation, the equation of a line of flow has the form:

$$\sin \frac{\pi}{h} z \cos \frac{\pi}{h} x = C$$

giving the family of curves in Figure 2. The stress does not depend on the value of the viscosity, ν , and is proportional to d , g , and h . Maximum values of the stress (which occur on the boundary, mid-way between the ascending and descending streams) are given. The conclusion is reached that the development of the convective process depends on the super-adiabatic vertical gradient rather than on the horizontal change in temperature. At the start, there is a slow increase in velocities and temperature variations followed, after several million years, by rapid changes.

The fixed boundary is now considered in detail. The solution of the foregoing equations for stationary

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convection ($P = 0$) is well known. Denoting this solution by $W(x, z)$, the author seeks for a solution of his problem in the form: $w(x, z, t) = C(t)W(x, z)$. $W(x, z)$ is expressed as a function of sinusoidal and hyperbolic factors and, after substituting in Eq.(12) and integrating $C(t)$ is obtained. This then gives Eq.(20) for the vertical component of the velocity, w . As a confirmation of the results obtained, they are compared with the data published by Brooks (Ref 5):

- 1) The flow is cyclic and has phases of accelerated and decelerated motion.
- 2) The cycle is approximately symmetrical in time - in the last stages, smaller and smaller cells are formed.
- 3) An initial velocity of 5 cm/year and a maximum of 70 cm/year are obtained.

An estimate is finally made of the convective velocities for a vertical temperature gradient close to the adiabatic. This is done by considering the solution for stationary convection with a temperature distribution given by Eq.(21). It is pointed out that a more important source of convection in the envelope is the flow from the core. It is shown that the mean value of w depends on the square root of

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the heat flow due to transfer of mass.
It is concluded that convection in the Earth's envelope due to a horizontal distribution of sources does not produce velocities and stresses exceeding mm/year and 10^6 dynes/cm². Velocities and stresses in currents due to unequal distribution of temperature with depth reaches cm/year and 10^7 dynes/cm². The motion due to the super-adiabatic, vertical temperature gradient has been shown to have a non-stationary character. The numerical calculations have shown that, if this convection includes most of the envelope, then the velocity of flow ~ 1 m/year and the time from initiation of convection to its greatest development is ~ 100 million years. If the convection is confined to a narrow layer, the corresponding values are ~ 2 cm/year and a billion years.
There are 2 figures and 6 references, 2 of which are Soviet and 4 English.

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Thermal Convection in the Earth's Envelope

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ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni
M.V. Lomonosova (Moscow State University imeni
M.V. Lomonosov)

SUBMITTED: June 12, 1957

Card 12/12

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S/049/62/000/011/005/006
D207/D308

3.9300

AUTHORS: Latynina, L.A. and Karmaleyeva, R.M.

TITLE: First results of the observations made with horizontal extensometers in T'ien-shang

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya geofizicheskaya, no. 11, 1962, 1574 - 1578

TEXT: The first long extensometers (deformographs) were installed in the USSR in 1961 at the Talgar geophysical station in the region of Alma-Ata. Two extensometers were placed horizontally in a horizontal tunnel 50 m from its entrance; at this location the diurnal temperature variations did not exceed several hundredths of a degree. The extensometers consisted of quartz tube sections joined by Invar unions; one (26 m long) was placed along the north-south direction, the other (4 m long) along the east-west direction. Each was fixed at one end to a concrete platform. The other end was free and it recorded the horizontal displacement of the earth's surface down to 0.2 μ . The intention

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First results ...

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was to record the slow motions preceding earthquakes. During the period of observations (November 1961 - June 1962) no earthquakes occurred near the station but the authors found tidal motion superimposed on the background of seasonal variations. From the analysis of this tidal motion the elastic constants of the earth (Love number h and Shid number l) were determined. It was found that $h = 0.46, 0.38$; $l = 0.07, 0.07$; the two sets of figures correspond to the 12-hour and 24-hour tidal waves caused by the moon. Acknowledgements are made to Ye.A. Koridalin and I.L. Nersesov for help and advice in this work. There are 3 figures.

ASSOCIATION: Akademiya nauk SSSR Institut fiziki Zemli
(Academy of Sciences USSR Institute of
Physics of the Earth)

SUBMITTED: July 9, 1962

Card 2/2

L 35930-66 EWT(1)/EWP(e)/EWT(m) WH/GW

ACC NR: AT6011163

SOURCE CODE: UR/3197/65/000/002/0376/0381 48

AUTHOR: Latynina, L. A.; Karmaleyeva, R. M. 21

ORG: Institute of the Physics of the Earth, AN SSSR (Institut fiziki zemli AN SSSR)

TITLE: Measurement of horizontal displacements on the earth's surface, using quartz extensometers

SOURCE: AN EstSSR. Institut fiziki i astronomii. Sovremennyye dvizheniya zemnoy kory. Recent crustal movements, no. 2, 1965, 376-381

TOPIC TAGS: ~~crustal movement, horizontal crustal movement~~, geophysic instrument, seismologic instrument, EARTH CRUST, TECTONICS, SEISMOLOGY

ABSTRACT: Since 1961 systematic observations of slow horizontal movements of the earth's surface have been conducted with a quartz extensometer (deformograph) at the Talgar geophysical station (near Alma-Ata). The instrumentation makes it possible to measure relative displacements of points on the earth's surface, horizontally scattered at 25 m (base of the instrument). The instrument is used for registration of contemporary tectonic movements, long-period seismic oscillations, tidal movements of the earth's crust, and movements caused by meteorological factors. The instrument is installed in a

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UDC: 550.342

L 35930-66

ACC NR: AT6011163

passage running in a meridional direction. The bar of the instrument consists of quartz tubes, connected by invar skewers. One end of the bar is rigidly fastened to the rock (cemented at the base), the other end is free-moving. The motions of the free end of the bar are recorded twice: by direct registration and by remote photoelectric registration. A roller between the bar and the top of the base serve as the displacement sensor. The threshold value of registered displacements is 0.05 μ . Maximum rock displacements over a 3-yr period (October 1961—June 1964) were 30 μ . During the first three months the deformation was greater than in following months because the supporting bases had yet to become stabilized. Residual deformation for the 3 yr was 3 μ . Seasonal deformation with an amplitude of 1 μ was noted. A change in the sign of deformation was registered before the Aleutian earthquake of 29 March 1964. Soon after the earthquake the sign changed again. There is no adequate explanation for the relationship between these phenomena. No direct relationship was detected between the rate of rock deformation and the moments at which nearby earthquakes occurred. The elastic constants of the earth, the Love number h and Shida (Japan) number were computed as 0.36 and 0.05, respectively, on the basis of horizontal tidal deformations. As compared with the data of gravimetric and tilt-meter observations, h is lower by 30—40%; this can be explained by the fact that the instrument was near the surface of the ground.

SUB CODE: 08/ SUBN DATE: none/ ORIG REF: 002/ OTH REF: 003

Card 2/2 *ll*

I 34985-66 EWT(1) GW

ACC NR: AP6026256

SOURCE CODE: UR/0387/66/000/005/0033/0042

AUTHOR: Savarenskiy, Ye. F. (Doctor of physicomathematical sciences); Nersesov, I. L.; Karmalayeve, R. M.; Latynina, L. A.

ORG: Institute of Physics of the Earth, AN SSSR (Institut fiziki Zemli AN SSSR)

TITLE: Long-period waves of the Aleutian earthquake² of 4 February 1965 recorded by quartz extensometers

SOURCE: AN SSSR. Izvestiya. Fizika zemli, no. 5, 1966, 33-42

TOPIC TAGS: earthquake, Rayleigh wave, internal friction

ABSTRACT: This paper gives an analysis of long-period oscillations from the earthquake of 4 February 1965 which occurred in the Aleutian Islands. The tremor ($M = 8.5$) was recorded by extensometers at Talgar (Kazakh SSR) and Dzherino (Tadzhik SSR). It was possible to detect groups of Love waves from the 2d to 9th order with periods from 70 to 720 sec and groups of Rayleigh waves from the 2d to 13th order with periods of 120-330 sec. The dispersion curves of the group velocities of these waves were obtained. The authors determined the amplitudes of the displacements in the R and L waves, the coefficients of decrease of the amplitudes γ and the parameter Q, characterizing internal friction in the earth. The value Q agrees with the data obtained by other authors. The values Q, determined from Love waves, vary from 60 to 120 when $T = 300-500$; the values Q for Rayleigh waves vary in the range 150-200 when $T = 200$. Orig. art. has: 7 figures, 7 formulas, and 3 tables. [JPRS: 36,553]

SUB CODE: 08 / SUBM DATE: 03Aug65 / OTH REF: 005

Cord 1/1 BLG UDC: 550.342(798)

09/6

1805

L 62220-65 ENT(1)/EWG(v) Po-4/Pe-5/Pq-4/Pg-4 GN

ACCESSION NR: AP5017165

UR/0387/65/000/002/0075/0079
525.6

AUTHORS: Balavadze, B. K.; Karmaleyeva, R. M.; Kartvelishvili, K. Z.; Latynina, L. K. 34 33 3

TITLE: Observations on tidal deformations of the earth by means of a horizontal extensometer in Tbilisi

SOURCE: AN SSSR. Izvestiya. Fizika zemli, no. 2, 1965, 75-79

TOPIC TAGS: tide, earth figure, deformation meter, quartz

ABSTRACT: Two large quartz extensometers were set up in the underground observatory of the Institut geofiziki Gruzinskoy AN (Geophysical Institute of the Georgian Academy of Sciences) in Tbilisi in 1962. The tunnel (100 m long) in which the instruments were placed is in tuffaceous sandstone and mudstone, and is lined with a layer of concrete 30-40 cm thick. One extensometer, with a 41-m base, is set up 40 m from the tunnel entrance. Its sensitivity is $0.22 \cdot 10^{-8}$ mm, and it is oriented N 60° E. The other instrument, with a 14.5-m base, is set up 70 m from the entrance. Its sensitivity is $0.7 \cdot 10^{-8}$ mm, and it is oriented N 30° W. The instruments record the displacement of two fixed points on the earth's surface, the distance between

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ACCESSION NR: AP5017165

the points being the instrumental base. Connection with the ground is made through rigid rods (tubes of transparent quartz glass, 3 m. long, 40 mm in diameter, and with walls 2-3 mm thick). A continuous record was obtained from only the N 30° W instrument because of moisture damage to the other. For June-September 1963 this instrument showed a tidal displacement amounting to $3.5 \cdot 10^{-8}$ mm. The durations of the fluctuations were subjected to harmonic analysis to isolate the tidal component. The ratio of elastic constants (Love number to Shida number) was found to be 6.6. Assuming the first to be 0.5-0.6, the second would then be 0.08-0.09, a value that is in good agreement with other authors. The value of the Love number, computed separately, is found to be lower than that given by gravimetric data and inclinometer measurements. It is possible that the variation may be due to local peculiarities in deformation. Orig. art. has: 2 figures, 2 tables, and 8 formulas.

ASSOCIATION: Akademiya nauk SSSR, Institut fiziki Zemli (Academy of Sciences SSSR, Institute of Physics of the Earth)

SUBMITTED: 04May64

ENCL: 00

SUB CODE: ES, ME

NO REF SOV: 003

OTHER: 002

Card 2/2

KONDAKOV, Nikolay Sergeevich; LATYNOV, Ivan Aleksandrovich

[Lyudinovo] Liudinovo: Kaluga, Kaluzhskoe knizhnoe izd-vo
1963. 236 p. (MIRA 17:5)

LATYNTSEV, M.P., inzh.

Glass facing tile. Za indus.Riaz. no.2:53-59 D '61. (MIRA 16:10)

1. Stroitel'noye upravleniye No.24 tresta "Ryazan'zhilstroy".

LATYNTSEVA, N.

AUTHOR: None Given

27-2-19/19

TITLE: Information (Informatsiya)

PERIODICAL: Professional'no-Tekhnicheskoye Obrazovaniye, 1958, # 2,
(153) pp 32-33 (USSR)

ABSTRACT: B.Kopilev, the Deputy Director for Cultural Education Work writes of the 25th anniversary of the Stepanetsk Agricultural Mechanization School in Cherkasskaya Oblast' (Stepanetskoye uchilishche mekhanizatsii sel'skogo khozyaystva, Cherkasskaya Oblast'). During these 25 years the school has graduated about 10,000 specialists in agricultural mechanization.

P.Khazov, Senior Inspector of the Aktyubinskaya Oblast' Labor Reserves Administration writes of the activities of the Aktyubinsk Oblast' Labor Reserves School for Agricultural Mechanization (Uchilishche mekhanizatsii sel'skogo khozyaystva Aktyubinskogo oblastnogo upravleniya trudovykh rezervov)

V. Yatsenko and A.Sapozhnikov tell how the students of the Trade School No 39 in Sverdlovsk (Remeslennoye uchilishche No 39 g. Sverdlovsk) spend their free time at different clubs and sports sections.

Card 1/2

Information

27-2-19/19

N.Latyntseva reports on the Agricultural Exhibition in Chirchik in which the school institutions of the Labor Reserves in Southern-Kazakhstanskaya Oblast' (Uchebnyye zavedeniya trudovykh rezervov Yuzhno-Kazakhstanskoy oblasti) took part.

General information is given on the publication of a new symposium, "With One's Own Hands" ("Svoimi rukami"). Published by Trudrezervizdat in 1957, it contains descriptions of models and designs in the fields of photography, electricity, radio engineering, model airplane flying and motor acquatics.

There are 4 photographs.

AVAILABLE: Library of Congress

Card 2/2

LATYNINA, L.A.

Differences in the course of short-range point shifting on the earth's surface. Izv. AN SSSR. Ser. geofiz. no.4:478-484 Ap '62. (MIRA 15:4)

1. Institut fiziki Zemli AN SSSR.
(Earth movements)

LATYNINA, L.A.; KARMALEYEVA, R.M.

First results of observations performed with a horizontal
extensometer in the Tien Shan. Izv. AN SSSR. Ser. geofiz.
no.11:1574-1578 N '62. (MIRA 15:11)

1. Institut fiziki Zemli AN SSSR.
(Tien shan—Extensometer)

L 05648-67 EWT(m)/ENP(j) IJP(c) RM

ACC NR: AP6026759 (A)

SOURCE CODE: UR/0138/66/000/005/0003/0004

AUTHOR: Gostev, M. M.; Bryantsev, V. V.; Kovrizhko, L. F.; Sotnikov, I. P.;
Kurbanova, Z. N.; Latyning, S. G.; Shestakova, O. G.

ORG: Voronezh Synthetic Rubber Plant (Voronezhskiy zavod sinteticheskogo kauchuka);
Voronezh Tire Plant (Voronezhskiy shinny zavod)

TITLE: Oil-extended stereoregular cis-1,4-butadiene rubber

SOURCE: Kauchuk i rezina, no. 5, 1966, 3-4

TOPIC TAGS: polybutadiene, filler, plasticizer, vulcanization

ABSTRACT: The conditions of preparation of oil-extended cis-1,4-polybutadiene and the relationship between the methods of extending the rubber and the properties of the rubber mix and vulcanizates were studied. Aromatic PN-6^{1b} and tall oil were used as plasticizers and fillers. The properties of the oil-extended rubbers were studied in a special tread mix of the composition (in pts. by wt.): cis-1,4-polybutadiene 100; sulfur 1.6; Santocure 0.9; zinc oxide 3.0; product 4010NA 0.5; Antilux 1.0; KhAF-type carbon black (Vulcan 3) 60.0; oil 13.0. The workability of the mixes was determined from their millability. The tread mixes were vulcanized at 143°C. Rubbers obtained by introducing the oil at the solution stage displayed a better workability than those prepared by adding the oil in the mixer; their tensile strength and resistance to crack propagation were also higher. It is concluded that the good workability of oil-extend-

Cord 1/2

UDC: 678.762.2(+665.583).04.12

L 05648-67

ACC NR: AP6026759

ed rubbers permits the preparation of tread mixes from 100% cis-1,4-polybutadiene.
Orig. art. has: 1 table.

SUB CODE: 11/ SUBM DATE: 06Nov65/ ORIG REF: 002/ OTH REF: 010

Card 2/2 *eqh*

LATYNSKA-KOWNACKA, Ewa; MAY, Jozef; SZADUJKIS-LINCEL, Halina

A case of tuberculous endocarditis. Gruzlica 30 no.7:661-666
'62.

1. Z Oddzialu V Ordynator: dr med. J. May i z Pracowni
Anatomopatologicznej Kierownik: dr med. M. Afek-Kaminska
Miejskiego Szpitala Zakaznego Nr 1 w Warszawie.
(TUBERCULOSIS, CARDIOVASCULAR) (ENDOCARDIUM)

ЛАТЫПОВ, А. А.

Dissertation: "Investigation of Planetary Nebula and the Proper Motion of Stars in the Constellation of Lyra." Cand Phys-Math Sci, Main Astronomical Observatory, Acad Sci USSR, Leningrad, 1954. Referativnyy Zhurnal — Astronomiya, Moscow, May 54.

SO: SUM 284, 26 Nov 1954

^A
LATYPOV, A.; RAKHIMOV, A.

Photographic observations of Arend-Roland's comet (1956 h) in
Tashkent. Astron.tsir. no.193:1 Jy '58. (MIRA 12:1)

1. Tashkentskaya astronomicheskaya observatoriya AN UzSSR.
(Comets--1956)

SENTSOVA, Yu.Ye., mladshiy nauchnyy sotrudnik; LATYPOV, A.A.; BARKHATOVA,
K.A.; TORAO, M.;

Results of photographic observations of artificial earth
satellites. Biul.sta.opt.nabl.isk.sput.Zem. no.4:18-23
'59. (MIRA 13:6)

1. Astronomicheskiy Sovet AN SSSR (for Sentsova). 2. Nachal'nik
fotograficheskoy stantsii iskusstvennykh sputnikov Zemli
Tashkenatkey astronomicheskoy observatorii AN UzSSR (for
Latypov). 3. Rukovoditel' Astronomicheskoy observatorii Ural'-
skogo gosuniversiteta (for Barkhatova). 4. Sotrudnik
Astronomicheskoy Mitaka bliz Tokio (for Torao).
(Artificial satellites--Tracking)

ZYABLOVSKAI, E.Ya., nablyudatel'; LATYPOV, A.A.

Results of photographic observations of artificial earth
satellites. Biul.sta.opt.nabl.isk.sput.Zem. no.7:25-28
'59. (MIRA 13:5)

1. Nachal'nik fotograficheskoy stantsii Latvyskogo gosuniver-
siteta (for Zyablovskia). 2. Nachal'nik fotograficheskoy
stantsii Tashkentskoy astronomicheskoy observatorii AN UzSSR
(for Latypov).

(Artificial satellites--Tracking)

NEVEL'SKIY, A.V., mladshiy nauchnyy sotrudnik; BRATIYCHUK, M.V.;
SAVRUKHIN, A.P.; MOZHZHERIN, V.M.; LATYPOV, A.A.; CHUPRINA,
R.I., mladshiy nauchnyy sotrudnik

Results of photographic observations of artificial earth
satellites. Biul.sta.opt.nabl.isk.sput.Zem. no.8:17-24
'59. (MIRA 13:6)

1. Astrosvet AN SSSR (for Nevel'skiy). 2. Nachal'nik stantsii
opticheskikh nablyudeniy Uzhgorodskogo gosuniversiteta (for
Bratiychuk). 3. Nachal'nik stantsii fotonablyudeniya iskusstvennykh
sputnikov Zemli pri Instantsii nablyudeniya sputnikov Krymskoy
astrofizicheskoy observatorii (for Mozhzherin). 5. Nachal'nik
fotograficheskoy stantsii Tashkentskoy astronomicheskoy
observatorii AN UzSSR (for Latypov). 6. Astrosvet AN SSSR (for
Chuprina).

(Artificial satellites--Tracking)

KISELEVA, T.P.; FEDCHUN, M.S.; LATYPOV, A.A.; BABADZHANOV, P.B.; RUSSO,
Yu.D.; CHUPRINA, R.I., nauchnyy sotrudnik

Results of photographic observations of artificial earth
satellites. Biul.sta.opt.nabl.isk.sput.Zem. no.9:16-24
'59. (MIRA 13:3)

1. Glavnaya (Pulkovskaya) Astronomicheskaya observatoriya AN
(SSSR (for Kiseleva)). 2. Glavnaya Astronomicheskaya observatoriya
AN USSR, Kiev, nachal'nik stantsii nablyudeniy (for Fedchun).
3. Tashkentskaya astronomicheskaya observatoriya AN UzSSR,
nachal'nik fotograficheskoy stantsii (for Latypov). 4. Institut
astrofiziki AN Tadzhikskoy SSR, Stalinabad, nachal'nik stantsii
fotonablyudeniy iskusstvennogo sputnika Zemli (for Babadzhanov).
5. Odesskaya astronomicheskaya observatoriya, nachal'nik
stantsii nablyudeniy iskusstvennogo sputnika Zemli (for Russo).
6. Astrosovet AN SSSR (for Chuprina).
(Artificial satellites--Tracking)

Latypov, A.A.

S/166/60/000/03/10/011
C111/C222

AUTHOR: Latypov, A.A.

TITLE: Chromatic Aberration of the Photo Objective of the Tashkent Normal
✓ Astrograph ✓

PERIODICAL: Izvestiya Akademii nauk Uzbekskoy SSR, Seriya fiziko-matematicheskikh nauk, 1960, No. 3, pp. 57 - 59

TEXT: While the spherical aberration, the astigmatism and the distortion of the objective of the normal astrograph of the Tashkent Observatory have been determined in (Ref. 1,2) now the author investigates the chromatic properties of the objective. The obtained chromatic aberration is compared with the well-known data for the objectives of the astrographs in Potsdam and Pulkovo. The author mentions M.F. Subbotin, Ye.A. Kharadze, M.A. Vashakidze, I.I. Breydo, and A.A. Markelova. There is 1 figure, 1 table, and 8 references : 7 Soviet and 1 German.

ASSOCIATION: Tashkentskaya astronomicheskaya observatoriya (Tashkent
Astronomical Observatory)

SUBMITTED: February 27, 1960

Card 1/1

3,1220 (1051, 1114, 1057)

29574

S/033/61/038/004/010/010
E133/E135

AUTHORS: Latypov, A. A., and Ustimenko, F. G.

TITLE: The utilization of a quartz generator and the synchronous motor from a printing chronograph as a clock mechanism for parallactic mountings

PERIODICAL: Astronomicheskii zhurnal, vol. 38, no. 4, 1961, 772-773

TEXT: Photography with telescopes of long focal length involves frequent positional corrections. This is due to a variety of reasons, e.g. periodic errors in the driving mechanism, differential refraction, etc. The normal astrograph of the Tashkent Astronomical Observatory (diameter 330 mm, focal length 3463 mm) was built at the end of the last century. It has the normal type of gear mechanism without a second control. It can, however, be regulated by means of a conical pendulum, but this arrangement does not seem to work very well. Therefore, the authors have tried using the mechanism of an electric chronograph (measuring time intervals to an accuracy of 0.005 sec). This chronograph consists of a synchronous motor fed by a frequency-stabilized current. Stabilization is by means of a quartz

Card 1/3₂

The utilization of a quartz generator... ²⁹⁵⁷⁴ S/033/61/038/004/010/010
E133/E135

generator working at 50 c/s and 110, 127 or 220 V. The
chronograph motor does 3000 r.p.m. This is reduced by four gear
wheels to 60 r.p.m. and is transmitted to the worm gear. The
layout is shown in Fig.1. The arrangement has been in use for
six months and has been found very convenient. The telescope
position only requires readjustment every 8-10 minutes now.
There is 1 figure. X

ASSOCIATION: Tashkentskaya astronomicheskaya observatoriya
Akademii nauk UzSSR
(Tashkent Astronomical Observatory, AS Uz.SSR)

SUBMITTED: November 23, 1960

Card 2/2

S/035/62/000/001/005/038
A001/A101

AUTHORS: Fatchikhin, N. V., Latypov, A. A.

TITLE: The catalog of galaxies in the declination zone from -5° to -25° , selected for determinations of absolute proper motions of stars

PERIODICAL: Referativnyy zhurnal. Astronomiya i Geodeziya, no. 1, 1962, 37, abstract 1A317 ("Tsirkulyar Tashkentsk. astron. observ.", 1959, 10, avg., no. 302, 1-16)

TEXT: The Pulkovo program of observing galaxies for determination of absolute stellar proper motions was continued to a declination of -25° . Over 100 plates were taken in 1959 with the Tashkent astrograph for 48 centers selected in the zone from -5° to -25° in declination. 226 galaxies on these plates were analyzed to determine their suitability for precision measurements. Estimates were made according to a 10-point scale developed at Pulkovo. As a result, a catalog of 48 galaxies (no. 158 - 205) was compiled, which describes them and provides estimates of their suitability for precision measurements. ✓

D. Karimova

[Abstracter's note: Complete translation]

Card 1/1

TREPACHEV, Ye. P.; LATYPOV, A.G.

Millet

Chemical composition of some varieties of foxtail millet. Korm. baza 3, no. 9, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

LATYPOV, A.G.

USSR/Soil Cultivation. Cultivation, Melioration, Erosion.

J-5

Abs Jour: Ref Zhur-Biologiya, No 1, 1958, 1290.

Author: Ashimov, G., Latypov, A.G.

Inst :

Title : Treatment of Soil According to T.S. Mal'tsev's method (results of two years of experiments).

Orig Pub: S. kh. Bashkirii, 1956, No 12, 14-17.

Abstract: Data acquired on the Sterlitameksiy, Birskiy, and Ufimskiy test plots of Bashkiria, as well as production experiments in kolkhozes (1955 and 1956), indicate that deep plowing, without the moldboard of leached and rich chernozems and gray forest soils increases the yields of winter rye and spring wheat by 4-5 centners/hectare over ordinary plowing with the moldboard. A significant decline in the yield of the first crop was noted on the friable carbonate chernozems of the arid regions of the Republic.

Card : 1/1

-2-

LATYPOV, A.G., aspirant

Nutritional conditions and the accumulation of essential oil
in mint and water parsnip. Izv. TSKhA no.3:224-233 '60.
(MIRA 14:4)

(Mint) (Parsnips) (Essences and essential oils)

LATYPOV, A.L., kand.med.nauk

Split bed board for spinal traction. Ortop.travm.i protez. 21
no.3:53-55 Mr '60. (MIRA 14:3)

1. Iz kafedry ortopedii i travmatologii (zav. - zacluzh.dbyatel'
nauki prof. L.I.Shulutko) Kazanskogo instituta usovershenstvovaniya
vrachey).

(ORTHOPEDIC APPARATUS)

LATYPOV, A. L., kand. med. nauk.

Some problems in correcting scoliosis by the traction method.
Ortop., travm. i protez. no.11:19-21 '61. MIRA 14:12)

1. Iz kafedry ortopedii i travmatologii (zav. - prof. L. I. Shulutko)
Kazanskogo instituta usovershenstvovaniya vrachey.

(SPINE--ABNORMITIES AND DEFORMITIES)

LATYPOV, A.L., kand.med.nauk

Pathogenesis of mottled osteoporosis. Kaz.med. zhur. no.2:
50-52 Mr-Ap'63 (MIRA 16:11)

1. Kafedra ortopedii i travmatologii (zav. - prof. L.I.Shulutko)
Kazanskogo gosudarstvennogo instituta dlya usovershenstvovaniya
vrachei imeni Lenina i laboratoriya elektrofiziologii Kazansko-
go instituta ortopedii i travmatologii.

*

LATYPOV, A.I., kand. med. nauk (Kazan' 39, Proizvodstvennaya ul.,
d.4, kv.50)

Late results of the conservative treatment of congenital hip
dislocation. Ortop. travm. i protez. 24 no.5:30-33 My '63.
(MIRA 17:9)

1. Iz kafedry ortopedii i travmatologii (zav.- prof. L.I. Shulutko)
Kazanskogo instituta usovershenstvovaniya vrachey na baze Kaz-
anskogo instituta travmatologii i ortopedii (dir.- kand. med.
nauk U.Ya. Bogdenovich).

LATYPOV, A. Sh.

Oilseed Plants

Effect of deep plowing on the yield of crambe hispanica. Sov. agron. 10 no. 7, 1952.

Monthly List of Russian Accessions, Library of Congress, Sept. 1952. Unclassified

1. LATYPOV, A. Sh.
2. USSR 600
4. Plowing
7. Effect of plowing depth on weediness of soil, Dok. Ak. sel'khoz, 18, No. 11, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

1. LATYPOV, A. Sh.
2. USSR 600
4. Plowing
7. Consequence of deep plowing for the yield of farm crops, Sov. agron, 11, No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

LATYPOV, A.Sh., kandidat tekhnicheskikh nauk; POZDNYAKOV, Yu., inzhener.

P-5-35M plow for subtilling according to the method of T.S.Mal'tsev.
Sel'khoz mashina no.11:13-15 N '55. (MIRA 9:1)

(Plows)

LATYPOV, A. Z.

Latypov, A. Z. -- "Variance in the Quality of Seeds of Oats Depending on the Conditions under which they were Raised." Moscow Order of Lenin Agricultural Acad imeni K. A. Timiryazev, Moscow, 1955 (Dissertation for the Degree of Candidate in Agricultural Sciences)

SO: Knizhnaya Letopis', No. 23, Moscow, Jun 55, pp 87-104

LATYPOV, A.Z., kand. sel'khoz. nauk

Features of transforming spring wheat into winter wheat.
Agrobiologiya no.5:689-696 S-O '61. (MIRA 14:10)

1. Belorusskaya sel'skokhozyaystvennaya akademiya, g. Gorki,
Mogilevskoy oblasti.
(Wheat)

LATYPOV, A.Z., kand.sel'skokhozyaystvennykh nauk

Some methods for developing parent material in winter wheat breeding.
Agrobiologiya no.1:21-26 Ja-F '63. (MIRA 16:5)

1. Belorusskaya sel'skokhozyaystvennaya akademiya, g.Gorki,
Mogilevskoy obalsti.

(Wheat breeding)

LATYPOV, A.I.

Variation of the winter wheat forms caused by sowing
physiologically immature seeds. Bot.; issl. Bel. otd. VPO
no. 5:49-55 '63. (MIR 17:5)

SHIROKOV, A.A.; LATYPOV, E.A.

It pays to drill small diameter wells. Neftianik 5 no.6:7-8 Je
'60. (MIRA 13:7)

1. Starshiy inzhener proizvodstvenno-tekhnicheskogo otdela kontory
bureniya No.4 tresta Tuymazaburneft' (for Shirokov). 2. Starshiy
inzhener planovogo otdela kontory bureniya No.4 tresta Tuymaza-
burnef' (for Latypov).
(Tuymazy region (Bashkiria)--Oil well drilling)

*Dr. Eng., Mining Dept. Well-Drilling Unit
Tuymazy District*

KAGAN, Ya.M.; LATYPOV, V.Kh.

Investigating the viscosity of emulsions of reservoir D
of the Shkapovo field. Neft. khoz. 42 no. 3:32-35 Mr '64.
(MIRA 17:7)

GROMAKOV, S.D.; KURINNAYA, V.N.; LATYPOV, Z.M.; CHVALA, M.A.

New variant of the zone purification of substances. Zhur.
neorg. khim. 9 no.5:1305-1306 My '64. (MIRA 17:9)

1. Kazanskiy gosudarstvennyy universitet i Penzenskiy
pedagogicheskiy institut.

L 6760-65 EWT(1)/EPF(c)/EPA(w)-2/EEG(t)/T/XMA(m)-2 Pab-2h/Pr-1 IJP(c)/
AFWL/SSD(a)/AEDC(a)/RAEM(a)/AS(mp)-2/BSO/AFMDC/SSD/ESD(gs)/ESD(t) WH

ACCESSION NR: AP4042363

S/0056/64/047/001/0021/0023

AUTHORS: Kupriyanov, S. Ye.; Latyapov, Z. Z.; Perov, A. A.

88

86

TITLE: Long-lived highly excited states of positive ions

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 1, 1964, 21-23

TOPIC TAGS: ionization, stripped atom, helium, xenon, excited state, excitation spectrum, mass spectrometry

ABSTRACT: Experimental results are presented on stripping and ionization of He^+ , Xe^+ , Xe^{2+} , and Xe^{3+} ions near a metallic surface, with an aim at proving the existence of highly excited long-lived states of the ions He^+ , Ne^+ , Ar^+ , Kr^+ , Xe^+ , Hg^+ , Kr^{2+} , Xe^{2+} , and Xe^{3+} . It is demonstrated that these states lie quite close to the states of the continuous spectrum. The work was done with a double mass spectrometer described elsewhere (Z. Z. Latyapov, S. Ye. Kupriyanov, and

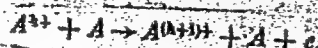
Card 1/4

L 6760-65

ACCESSION NR: AP4042363

2

N. N. Tunitskiy, ZhETF v. 46, 833, 1964). The long-lived highly-excited states of the ions were observed by using the "second impact" method whereby ionization is produced by one of three mechanisms:



The results confirm and supplement earlier data by two of the authors (Kupriyanov and Latypov, ZhETF v. 43, 815, 1963). They are in satisfactory agreement with the data obtained by R. E. Fox (Advances in Mass Spectrometry, 1959, p. 397). "I am grateful to Professor N. N. Tunitskiy for a discussion of the results." Orig. art. has: 1 figure and 4 formulas.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physicochemical Institute)

Card 2/4

L 6760-65

ACCESSION NR: AP4042363

SUBMITTED: 23Dec63

DATE ACQ:

ENCL: 01

SUB CODE: NP

NR REF SOV: 004

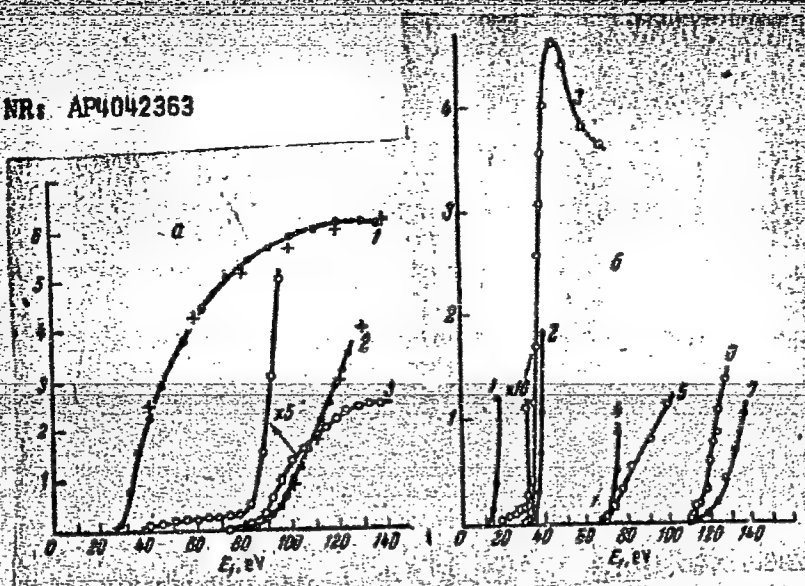
OTHER: 004

Card 3/4

L 6760-65

ACCESSION NR: AP4042363

ENCLOSURE: 01



Dependence of ion currents (arb. units) on the energy of the electrons ionizing the neutral He and Xe atoms in the ion source. a - ionization of helium, b - ionization of xenon

Card 4/4

ACCESSION NR: AP4042368

S/0056/64/047/001/0052/0060

AUTHORS: Kupriyanov, S. Ye.; Laty*poV, Z.Z.

TITLE: Detection of long-lived excited ions of the noble gases and mercury

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 1, 1964, 52-60

TOPIC TAGS: ionization, helium, xenon, krypton, argon, mercury, excited state, excitation spectrum, mass spectrometry

ABSTRACT: This is a companion to a paper by the authors (with A. A. Perov, ZhETF, 47, 21, 1964); Accession Nr. AP4042363), and is devoted to the production of singly, doubly, and triply charged long-lived highly excited ions, and also some metastable ions, by ionization of atoms of noble gases (Xe, Kr, Ar, Ne) and mercury with electrons. Only singly-charged excited ions were produced in the case of helium. The lifetimes were $\geq 10^{-6}$ sec. The investigations were car-

Card 1/4

ACCESSION NR: AP4042368

ried in crossed ion and electron beams in a double mass spectrometer with electron gun between two magnetic mass analyzers. The method is described elsewhere (Kupriyanov and Laty*pov, ZhETF v. 45, 815, 1963; Laty*pov, Kupriyanov, and N. N. Tunitskiy, ZhETF v. 46, 833, 1964). The excitation energy of the ions was determined by the method of secondary ionization of these ions. It is concluded from the potentials for the production of these ions that the excited ions are produced in states close to the states of their subsequent ionization. Orig. art. has: 4 formulas, 5 figures, and 1 table.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physicochemical Institute)

SUBMITTED: 03Feb64

ENCL: 02

SUB CODE: NP

NR REF SOV: 007

OTHER: 009

Card 2/4

ACCESSION NR: AP4042368

ENCLOSURE: 01

Energies of ground and metastable states of ions and experimental potentials for the production of excited ions, in eV*

	Hg ⁺	Xe ⁺	Kr ⁺	Ar ⁺
Ground states Основное состояние D ⁿ⁺	10,43 14,83	12,13 23,06	14,00 28,00	15,76 32,16
Metastable states Метаустойчивые состояния D ⁿ⁺		24,38 24,45 26,37	29,62 29,86 30,39	33,38 33,45 34,25
Основное состояние D ⁽ⁿ⁺¹⁾⁺ E _{in}	29,18 20	33,34 33	38,50 38	43,38 43

Card 3/4

Con't on Enclosure 2

LATYPOV, E.A., starshiy inzh.

Oil well drilling is continuously on the upswing. Neftianik
5 no.3:10-12 Mr '60. (MIRA 14:9)

1. Kontora bureniya No.4 tresta Tuymazaburneft'.
(Tuymazy region (Bashkiria)—Oil well drilling)

LATYPOV, E.K.; ZARIPOV, S.Z.; RAMAZANOV, D.Sh.

Using hydraulic mixers in test drilling in Bashkiria. Neft.
khoz. 38 no.11:26-30 N '60. (MIRA 14:4)
(Bashkiria—Mixing (Machinery))

LATYPOV, E.K.

Effect of temperature and thermal processing on the flow
properties of clay muds. Izv. vys. ucheb. zav.; neft' i gaz
4 no.9:33-39 '61. (MIRA 14:12)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti
imeni akademika I.M. Gubkina.
(Oil well drilling fluids)

LATYPOV, E.K.; FILATOV, B.S.

Installation for hydrodynamic studies of non-Newtonian fluids. Izv. vys. ucheb. zav.; neft' i gaz 5 no.3:85-90 '62. (MIRA 16:8)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti, imeni akademika I.M. Gubkina.

RAKHIMKULOV, R.Sh.; LATYPOV, E.K.

Determination of hydraulic resistances in drilling fluid flows
through pipes. Izv. vys. ucheb. zav.; neft' i gaz 6 no.10:63-
69 '63. (MIRA 17:3)

1. Ufimskiy neftyanoy institut i Ufimskiy nauchno-issledovatel'skiy
institut.

YANOVSKIY, S.M., dotsent; LATYPOV, K.L.

Case of perforating ulcer of the duodenum located at the site of
the transition of its vertical section to the lower horizontal.
Med. zhur. Uzb. no.4:51 Ap '61. (MIRA 14:5)

1. Iz Denauskoy gorodskoy bol'nitsy Surkhandar'inskoy oblasti
UzSSR.

(DUODENUM—ULCERS)

LATYPOV, M.

Receiving grain directly from the combine on virgin lands of
Sibay District in Bashkiria. Muk.-elev.prom. 26 no.7:4-5
J1 '60. (MIRA 13:8)

1. Direktor Sibayskogo khlebopriyemnogo punkta Bashkirskoy ASSR.
(Sibay District--Grain)

MASLOV, L.S.; LATYPOV, M.Z.; LYALIN, V.A.; ORADOVSKAYA, S.I.

Using paper-cardboard containers for packaging technical
lubricants and grease. Transp. i khran. nefti i nefteprod.
no.10:28-30 '64. (MIRA 17:12)

1. Nauchno-issledovatel'skiy institut po transportu i khraneniyu
nefti i nefteproduktov.

GERASIMOVA, Ye.T.; LATYPOV, N.G.

Characteristics of the mineralogical composition of fragmental
rock material from the Stalinogorsk horizon in the eastern
part of the Russian Platform. Dokl. AN SSSR 142 no.2:419-
421 Ja '62.
(MIRA 15:2)

1. Geologicheskii institut Kazanskogo filiala AN SSSR.
Predstavleno akademikom N.M.Strakhovym.
(Russian Platform--Minerals)

GERASIMOVA, Ye.T.; KUZNETSOV, A.V.; LATYPOV, N.G.

Lithological and mineralogical characterization of argillaceous rocks of a Lower Carboniferous terrigenous layer of the eastern Russian Platform. Dokl. AN SSSR 151 no.2:419-421 J1 '63. (MIRA 16:7)

1. Geologicheskii institut Kazanskogo filiala AN SSSR. Predstavleno akademikom N.M.Strakhovym.

(Russian Platform—Clay)

GERASIMOVA, Ye.T.; LATYPOV, N.G.

Characteristics of the mineral composition of the detrital material of the Lower Carboniferous terrigenous rocks in the Volga-Ural region. Dokl. AN SSSR 164 no.1:183-186 S '65. (MIRA 18:9)

1. Geologicheskii institut, Kazan'. Submitted May 25, 1965.

L 41352-65 EWT(m)/EPF(c)/T Pr-4 DJ
ACCESSION NR: AP3000501

8/0065/63/000/005/0018/0022

AUTHOR: Sedachev, V. M.; Nesmelov, V. V.; Moyseyeva, A. S.; Lebedeva, N. M.;
Kuznetsova, I. M.; Latypov, R. Sh.; Terpilovskiy, N. N.; Maminov, O. V.

TITLE: Oxidation of paraffin in the foam state

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 5, 1963, 18-22

TOPIC TAGS: synthetic lubricant, continuous oxidation, bubble column, paraffin fraction, paraffin oxidation

ABSTRACT: The Kazan' Synthetic Lubricant Plant in cooperation with the Kazan' Institute of Chemical Technology, has developed a new process for oxidizing highly foamed paraffin up to carboxylic acids. This continuous process was adopted on a pilot-plant scale in 1961. The new continuous foam process increases the yield up to 270% as compared with the previous process. The author gives the processing data and diagrams of equipment used, as well as a breakdown of the paraffin fractions and their specifications. The basic operating parameters are: temperature, 125 - 130°C; air consumption, 1 m³/kg of oxidized paraffin; acid number of oxidate, 50 - 60 mg of KOH. In order to obtain good air dispersion, the use of screens in

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ACCESSION NR: AP3000501

the bubble column is recommended. The final product meets the requirement placed on synthetic petroleum products. Orig. art. has: 5 tables and 2 diagrams.

ASSOCIATION: none

SUBMITTED: 00:

ENCL: 00

SUB CODE: 00, 1E

NO REF SOV: 000

OTHER: 000

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2/2

NESMELOV, V.V.; LEBEDEVA, N.M.; LATYPOV, R.Sh.; MAMINOV, O.V.;
RYSAYEVA, L.D.

Continuous oxidation of hydrocarbon raw materials in the foam
state. Khim. i tekhn. topl. i masel 10 no.3:23-25 Mr '65.
(MIRA 18:11)

1. Kazanskiy khimiko-tekhnologicheskii institut im. S.M. Kirova.

LEBEDEVA, N.M.; NESMELOV, V.V.; LATYPOV, R.Sh.

Experimental industrial testing of the continuous method of paraffin
oxidation. Khim. i tekhn. topl. i masel 10 no.7:32-35 J1 '65.
(MIRA 18:9)

1. Kazanskiy khimiko-tekhnologicheskii institut im. S.M.Kirova.

LATYPOV, S. inzh.

Increasing utilization of local building materials. Sel'.stroil.
14 no.6:7 Je '59. (MIRA 12:9)

1. Bashkirskoye upravleniye po stroitel'stvu v kolkhozakh.
(Bashkiria--Building materials)

TASHMUKHAMEDOV, S.A.; TILLAYEV, R.S.; USMANOV, Kh.U.; LATYPOV, T.

Grafting of methyl methacrylate into butyl rubber under the effect of gamma rays. Uzb. khim. zhur. 9 no.5:59-62 '65.

(MIRA 18:12)

1. Tashkentskiy gosudarstvennyy universitet imeni Lenina.
Submitted Feb. 5, 1965.

LATYPOV, V.Kh.; KAGAN, Ya.M.

Using surfactants in the field gathering of flooded oils.
Nefteprom. delo no.8:28-30 '64. (MIRA 17:12)

1. Neftepromyslovoye upravleniye "Aksakovneft'".

LATYPOV, Zh.

Accelerating the construction of the boundaries of refraction waves
with circle method. Izv. AN Kazakh. SSR. Ser. geol. no.1:100-103
'61. (MIRA 14:6)

: (Seismology)

LATYPOV, Zh.

Relationship in opposing systems of refraction hodographs for
cases of plane refraction boundaries. Izv. AN Kazakh. SSR
Ser.geol. no.2:108-110 '62. (MIRA 15:6)
(Seismic waves)

LATYLOV, Zh.

Nomogram for constructing refracting boundaries using the
 t_0 -method. Razved. i prom. geofiz. no. 48:24-28 '63 (MIRA 18:1)

LATYPOV, Zh.A.

Quantitative estimation of the accuracy of the construction of
refraction boundaries. Izv. AN Kazakh.SSR.Ser.geol.nauk 21
no.6:52-63 N-D '64. (MIRA 18:3)

1. Institut geologicheskikh nauk im. K.I.Satpayeva AN KazSSR.
Alma-Ata.

LATYPOV, Zh.A.

Method of determining the mean velocity from the time values
at four points of intersecting hodographs of refracted waves.
Vest. AN Kazakh. SSR 21 no.9:51-60 S '65. (MIRA 18:9)

ACCESSION NR: AP4036976

S/0078/64/009/005/1305/1306

AUTHOR: Gromakov, S. D.; Kurinnaya, V. N.; Letyapov, Z. M.; Chvala, M. A.

TITLE: A new modification of zone purification of materials.

SOURCE: Zhurnal neorganicheskoy khimii, v. 9, no. 5, 1964, 1305-1306

TOPIC TAGS: zone purification, method, crystallization front, monocrystal production, semiconductor, sodium nitrate, cadmium nitrate tetrahydrate, impurity separation, heating device, design

ABSTRACT: A method of zone purification was developed in which the crystallization plane area is increased, thereby enhancing the production of larger monocrystals particularly applicable in the production of semiconductors. This was accomplished by devising a method for maintaining the same temperature gradient near the periphery of the molten zone as in its center. Thus, heating circuits were constructed in the form of the curvature of the molten zone and of such design as to create a planar crystallization front by compensating for the heat removal. Perforated metal grids or conductors between electrodes (rectangular shape for rectangular rods or circular for cylindrical bars) may be used. These

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ACCESSION NR: AP4036976

should be of metals or alloys nonreactive with the molten metal. In a simple design, a vertical cylinder was heated at different temperatures. It was heated in the upper section to a temperature higher than the fusion temperature of the material and in the lower section to a lower temperature. A test tube containing the sample was lowered slowly so crystallization started at the bottom. A rigid heating element was kept at the temperature boundary to give a planar crystallization front. Tests run with sodium nitrate and cadmium nitrate tetrahydrate using colored impurities (sample lowered at 12 mm/hr) showed the impurities to be collected at one end of the bar. Orig. art. has: 2 figures.

ASSOCIATION: Kazanskiy gosudarstvennyy universitet, (Kazan State University);
Penzenskiy pedagogicheskiy institut (Penza Pedagogical Institute)

SUBMITTED: 16 Nov 62

DATE ACQ: 05 Jun 64

ENCL: 00

SUB CODE: GC, IE

NO REF SOV: 000

OTHER: 000

Card 2/2

I 16066-65 EWT(l)/EWP(e)/EPA(s)-2/ENG(k)/EWT(m)/EPF(c)/EPF(s)-2/ENG(v)/
 EPA/EPA(w)-2/EPF(l)/T/EPA(s)/EPF(c)/EPF(s)-2/ENG(v)/
 Pt-10/Pu-4 IJP(c)/ESD(t)/AFML/ASD(a)-5 W/AT/AM/WH
 S/0078/64/009/010/2485/2487
 ACCESSION NR: AP4046457

AUTHOR: Gromakov, S. D.; Zoroatskaya, I. V.; Letyapov, Z. M.; Chvala,
 M. A.; Eydel'man, Ye. A.; Badygina, L. I.

TITLE: Method for investigating phase diagrams of semiconducting systems

SOURCE: Zhurnal neorganicheskoy khimii, v. 9, no. 10, 1964, 2485-2487

TOPIC TAGS: semiconductor, phase diagram, semiconductor system, test
 apparatus design, solidus temperature, liquidus temperature

ABSTRACT: A method was developed for obtaining thermal data for semiconducting materials which avoids the inherent difficulties of air oxidation, thermal decomposition, and reaction with thermocouple and container materials. The material for thermographic investigation is placed in a quartz ampoule (3-4 mm i. d., 25-30 mm long), sealed under 1-2 mmHg. The thermocouple (fig. 1) made of 3-5 x 12-14 mm platinum foil (a) with soldered platinum rhodium leads (b, c) is arranged so the platinum foil surrounds the ampoule (fig. 1-C). The ampoule is

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